User's manual (short form)

eng

NVIP-5DN7021D/IR-2P

http://www.e-camere.ro/camere-supraveghere-ip/Novus/NVIP-5DN7021D-IR-2P

NOVUS®

IMPORTANT SAFEGUARDS AND WARNINGS

EMC (2004/108/EC) and LVD (2006/95/EC) Directives

CE Marking

Our products are manufactured to comply with requirements of the following directives and national regulations implementing the directives:

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- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.

WEEE Directive 2002/96/EC

Information on Disposal for Users of Waste Electrical and Electronic Equipment

This appliance is marked according to the European 1000VAC Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.
The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for used up electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

RoHS Directive 2002/95/EC

Out of concern for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, have been designed and manufactured in compliance with the above mentioned regulations. Simultaneously, we claim that our products have been tested and do not contain hazardous substances whose exceeding limits could have negative impact on human health or natural environment

Information
The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

Excluding of responsibility in case of damaging data on a disk or other devices:

The manufacturer does not bear any responsibility in case of damaging or losing data on a disk or other devices during device operation.

WARNING!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT DESCRIBED FOR THE GIVEN PRODUCT IN USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR IF IT DOES NOT ARISE FROM THE USUAL APPLICATION OF THE PRODUCT, MANUFACTURER MUST BE CONTACTED UNDER THE RIGOR OF EXCLUDING THE MANUFACTURER'S RESPONSIBILITY FOR THE RESULTS OF SUCH AN ACTION.

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IMPORTANT SAFEGUARDS AND WARNINGS

WARNING!

THE KNOWLEDGE OF THIS MANUAL IS AN INDISPENSIBLE CONDITION OF A PROPER DEVICE OPERATION. YOU ARE KINDLY REQEUSTED TO FAMILIARIZE YOURSELF WITH THE MANUAL PRIOR TO INSTALLATION AND FURTHER DEVICE OPERATION.

WARNING!

USER IS NOT ALLOWED TO DISASSEMBLE THE CASING AS THERE ARE NO USER -SERVICEABLE PARTS INSIDE THIS UNIT. ONLY AUTHORIZED SERVICE PERSONNEL MAY OPEN THE UNIT

INSTALLATION AND SERVICING SHOULD ONLY BE DONE BY QUALIFIED SERVICE PERSONNEL AND SHOULD CONFORM TO ALL LOCAL REGULATIONS

1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. You are not allowed to use the camera in high humidity environment (i.e. close to swimming pools, bath tubs, damp basements);
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
9. Mounting the camera on unstable surface or using not recommended mounts is forbidden. Improperly mounted camera may cause a fatal accident or may be seriously damaged itself. The camera must be mounted by qualified personnel with proper authorization, in accordance with this user's manual.
10. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the camera technical datasheet. Therefore, it is forbidden to supply the camera from a power sources with unknown parameters, unstable or not meeting producer's requirements;

Due to the product being constantly enhanced and optimized, certain parameters and functions described in the manual in question may change without further notice.

We strongly suggest visiting the www.novuscctv.com website in order to access the newest manual

http://www.e-camera.pl/kamere-supravgledne-ip/Novus/NVIP-5DN7021D-IR-2P

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1. FOREWORD INFORMATION

1.1. General Characteristics

- Imager resolution: 5.0 megapixels 4:3 ratio
- Mechanical IR cut filter
- IR operation capability
- Min. Illumination from 0,02 lx/F=2.8
- Wide Dynamic Range (WDR) for enhanced image quality in diverse light conditions
- Digital Slow Shutter (DSS)
- Digital Noise Reduction (DNR)
- Lens type:fish eye lens, f=1.05mm, F=2.8
- Built-in IR illuminator, 6 LEDs
- Privacy zones: 5
- 1 Alarm input and 1 alarm output
- Compression: H.264, M-JPEG
- Max video processing resolution: 2592x1944
- Quadruple streaming: compression, resolution, speed and quality defined individually for each video stream
- RTP/RTSP protocol support for video transmission
- Built-in speaker and microphone
- Pre & post-alarm functions
- Hardware motion detection
- Built-in webserver: camera configuration through the website
- MicroSD/SDHC card support
- Wide range of responses to alarm events: e-mail with attachment, saving file on FTP server, triggering alarm output, saving file on SD/SDHC card, HTTP notification
- Network protocol support : HTTP, TCP/IP, IPv4/v6, UDP, HTTPS, Multicast, FTP, DHCP, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS,
- Software: NMS (NOVUS MANAGEMENT SYSTEM) for video recording, live monitoring, playback and remote IP devices administration
- Power supply: 12VDC, 24V AC, PoE (Power over Ethernet)

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1.2. NVIP-5DN7021D/IR-2Pspecification

Model	NVIP-5DN7021D/IR-2P
Pick-up Element	1/2,5", 5M Progressive Scan CMOS
Imager Resolution	5 megapixels
Min. Illumination	Color: 0.2 lx / F 1.2; B/W: 0.02 lx / F 1.2; 0lx - IR on
S/N Ratio	> 50 dB (AGC Off)
Electronic Shutter	Auto / Manual (1/1.5 ~ 1/10 000 s)
Digital Slow Shutter (DSS)	1/25 s ~ 0.67 s
Wide Dynamic Range (WDR)	Lo /Mid /Hi / Off
White Balance	Auto / ATW / Manual (RGB)
Back Light Compensation (BLC)	On /Off
Synchronization	Internal
Day/Night Switching	Auto
Lens type	Fish eye lens, f=1.05mm, F=2.8
Angle of view (H)	180°
Image function	DNR – digital noise reduction,
Resolution	2592 x 1944, 2048 x 1536, 1920 x 1080, 1280 x 1024, 1280 x 720,1024 x 768, 800 x 600,720x576,640 x 480, 352x288
Frame Rate	Up to 10 fps for 2592 x 1944, up to 15 fps for 2048x1536, up to 25 fps for other streams*
Multi Streaming	4 streams
Video Compression	H.264/M-JPEG
Audio Compression	G.711 / G.726
Motion Detection	Hardware
System reaction to alarm event	E-mail with attachment, saving file on FTP, saving file to SD card, alarm output activation, HTTP notification
Pre/Post Alarm	Pre-alarm: up to 20 frame of picture or 3sec Post-alarm: up to 20 frame of picture or 9999sec
Video Saving Files	AVI(SD card), JPEG(FTP)
Simultaneous connection	8
Time Synchronization	Automatic time synchronization with NTP server
Network Protocols Support	HTTP, TCP/IP, IPv4/v6, UDP, HTTPS, Multicast, FTP, DHCP, DDNS, NTP, RTSP, RTP, UPnP, SNMP, QoS,
Software	NMS
Security	Password protected camera access and its configuration, HTTPS, IP filtering, IEEE 802.1X
Privacy Zones	5
Audio Input	1 x Jack (3,5mm), microphone
Audio Output	1 x Jack (3,5mm) internal 2W speaker
Alarm Input	1, (NO/NC)
Alarm Output	1, electronic relay galvanically isolated, 0.1A, 30V AC/DC
External Ports	1x Ethernet RJ-45 connector 10/100 Mbit/s, 1x microSD/SDHC
IR LED	6 pcs
IR effective range	5 m
Power Supply	12V DC/ 24V AC/ PoE(IEEE 802.3af)
Power Consumption	12W (IR on)
Operating Temperature	-10°C ~ 50°C
Dimensions (mm)	45,8 (H) x 149 mm (Ø)
Weight	0,35 kg

* Frame rate available for a specific camera configuration

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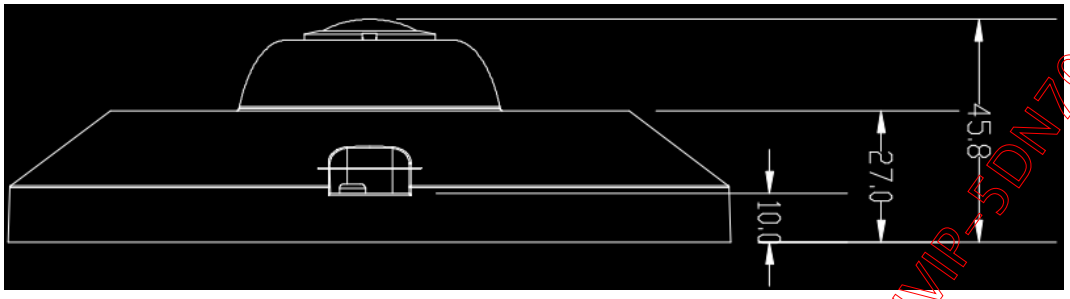
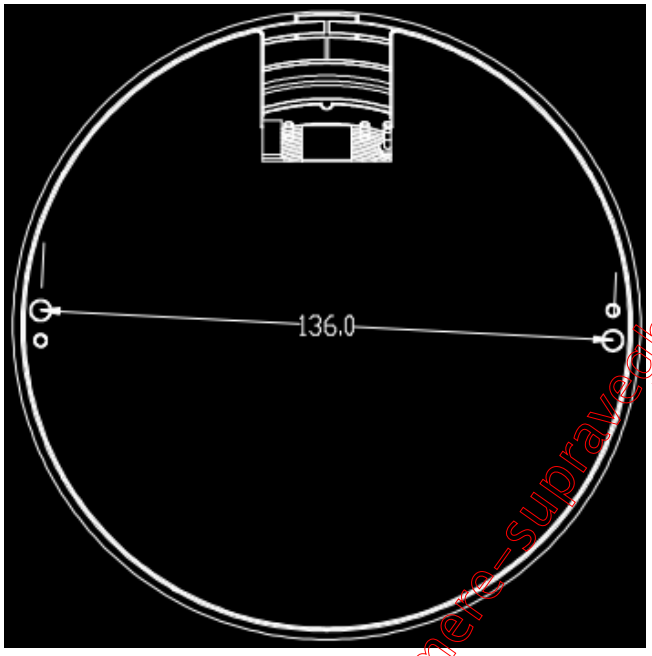
1.3. Camera dimensions

All dimensions are in mm





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1.4. Package contents

After you open the package make sure that the following elements are inside:

- IP camera
- Accessories bag
- Short version of user's manual
- CD containing manual and software
- Terminal block connector

If any of these have been damaged during transport, pack all the elements back into the original box and contact your supplier for further assistance.

CAUTION!
If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

Before starting the device familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

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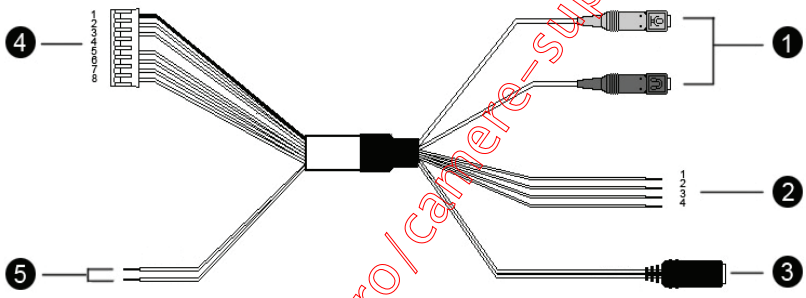
2. START-UP AND INITIAL IP CAMERA CONFIGURATION

2.1. Description of connectors and control tools

NVIP-5DN7021D/IR-2P

1. 12V DC/24V AC power connector
2. 100 Mb/s Ethernet port (RJ-45 connector)
3. Audio/alarm I/O connector block
4. Reset button
5. MicroSD card slot

Overview of auxiliary cable (option) together with connectors description:



1. Audio: input (pink jack) / output (green jack);
2. Alarm wires:
   1 ALM_IN -
   2 ALM_IN+
   3 ALM_OUT-
   4 ALM_OUT+
3. 24V AC power supply wires: red (+) / black (-);
4. Alarm connector block (connect to block no 3 in the camera);
5. 12V DC/24V AC power supply wires: Red (+), Black (-)

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START-UP AND INITIAL CAMERA CONFIGURATION

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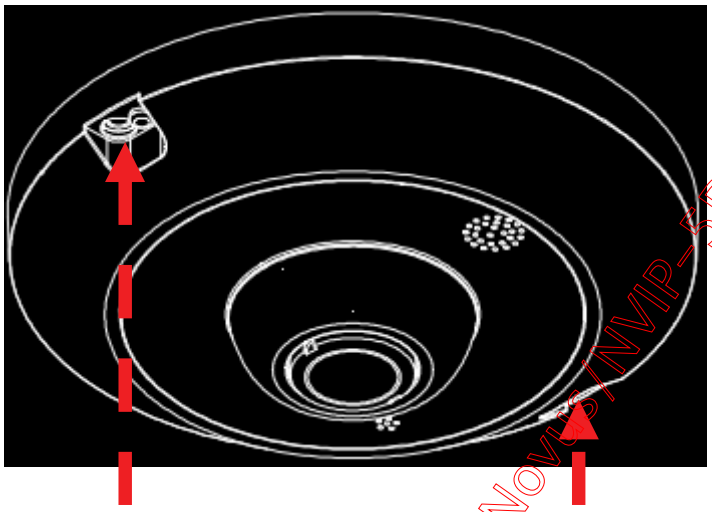
2.2. Mounting the NVIP-5DN7021D/IR-2P



1. Unscrew two screws (marked with arrows on the picture above) fastening the camera's casing and remove it.

2. Put the camera to a desired mounting location and use screw holes in its base as a template to mark points for drilling. Drill the anchor and (if required) cable holes and fix the camera to mounting surface using screws.

3. Perform necessary electrical connections inside the camera using both the Ethernet and (optional) camera cable.

4. Lead cables outside camera, put on the external casing and attach it using screws.

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2.4. Starting the IP camera

To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af).

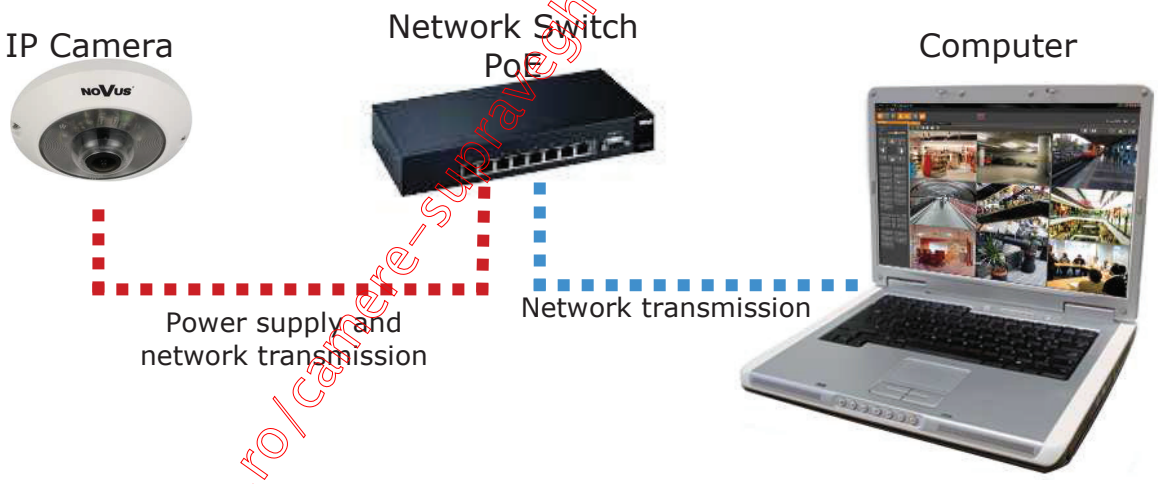
You can also connect it directly via power supply adapter with parameters compatible with camera power supply specification.

After connecting power supply green LED should light up. Initialization process is then started, which takes about 30 seconds. You can then proceed to connect to the camera via web browser.

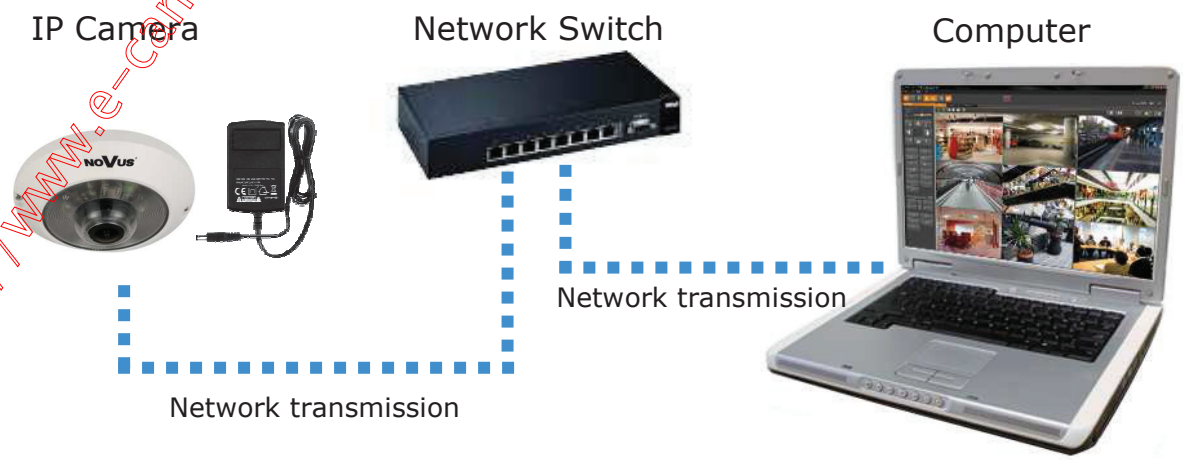
If the connection is successfully established orange LED blinks with a frequency proportional to the quantity of data sent. Connecting via web browser is then possible. If connection isn't established (the network cable is disconnected) green and orange LEDs aren't active, solid light means that network connection is ok but camera doesn't receive or send any data, with possible PC network settings error.

The recommended way to start an IP camera and perform its configuration is a connection directly to the network switch which is not connected to other devices. To obtain further information about network configuration parameters (IP address, gateway, network mask, etc.) please contact your network administrator.

- Connection utilising network switch with PoE support



- Connection utilising external power supply and network switch



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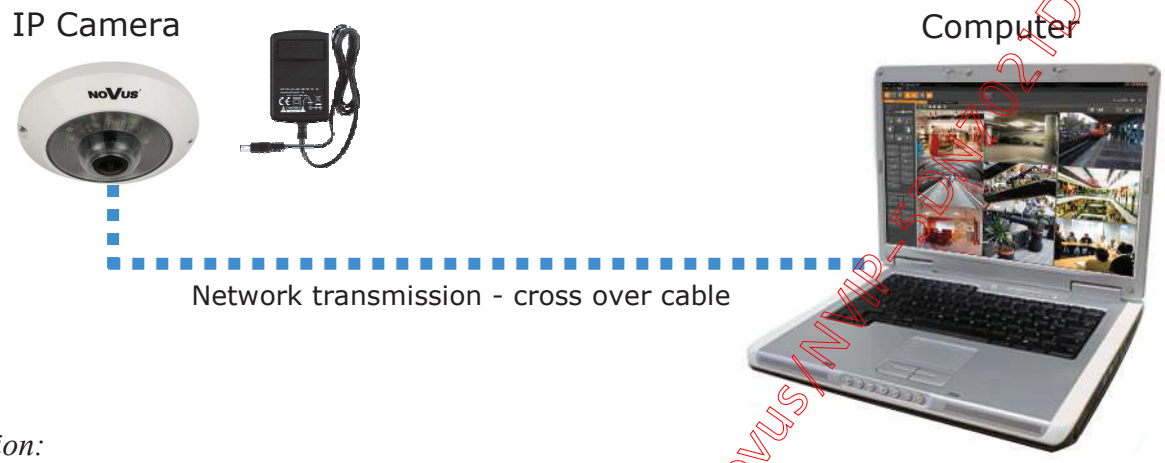
START-UP AND INITIAL CAMERA CONFIGURATION

- Connection utilising external power supply directly to the computer



Information:

Power supply adapter is not included. Please use power adapter with parameters specified in user's manual.

Caution:

In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors (e.g. NVS-110E/P) is advised. Any damages resulting from surges are not eligible for service repairs.

2.5. Initial configuration via the web browser

The default network settings for NVIP-2… IP camera series are :

1. IP address= **192.168.1.200**
2. Network mask - **255.255.255.0**
3. Gateway - **192.168.1.1**
4. User name - **root**
5. Password - **pass**

Knowing the camera's IP address you need to appropriately set PC IP address, so the two devices can operate in one network subnet (e.g. for IP 192.168.1.1, appropriate address for the camera ranges from 192.168.1.2 to 192.168.1.254, for example 192.168.1.60). It is not allowed to set the same addresses for camera and PC computer

You can either set a network configuration (IP address, gateway, net mask, etc.) of NOVUS IP camera yourself or select DHCP mode (DHCP server is required in this method in target network) by using web browser or by NMS software. When you use DHCP server check IP address lease and its linking with camera MAC address to avoid changing or losing IP address during device operation or network/ DHCP server breakdown. You have to remember to use a new camera IP address after changing network parameters.

After network setting configuration has been done, the camera can be connected to a target network.

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3. NETWORK CONNECTION UTILIZING WEB BROSWER

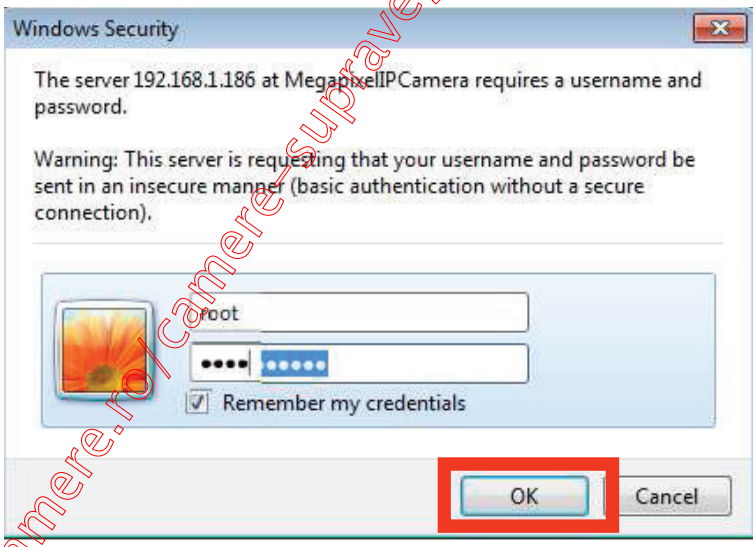
3.1. Recommended PC specification for web browser connections

Requirements below apply to connection with an IP camera, assuming smooth image display in 2592x1944 resolution and 10 fps speed.

1. CPU **Intel i5 2,4 GHz** or faster
2. **RAM** Memory min. **4 GB**
3. VGA card (any displaying **Direct 3D with min. 128 MB RAM** memory)
4. OS **Windows XP / VISTA**
5. **Direct X** version **9.0** or newer
6. Network card **10/100/1000 Mb/s**

3.2. Connection with IP camera via the Internet Explorer

You have to enter camera IP address in the Internet Explorer address bar. If IP address is correct user login window will be displayed:


Windows Security
The server 192.168.1.186 at MegapixelIPCamera requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
root
Remember my credentials
OK
Cancel

Default user is **root** and default password is **pass.**

For safety reasons, it is recommended to change default user name and password.

When you log on to the camera, web browser will download the applet for displaying images from the camera. Depending on the current Internet Explorer security settings it may be necessary to accept an ActiveX control. To do this, click the right mouse button on the message, select "Install Active X control" and then click Install. After successfully NVIP Viewer plug in downloading run and install it on a computer.

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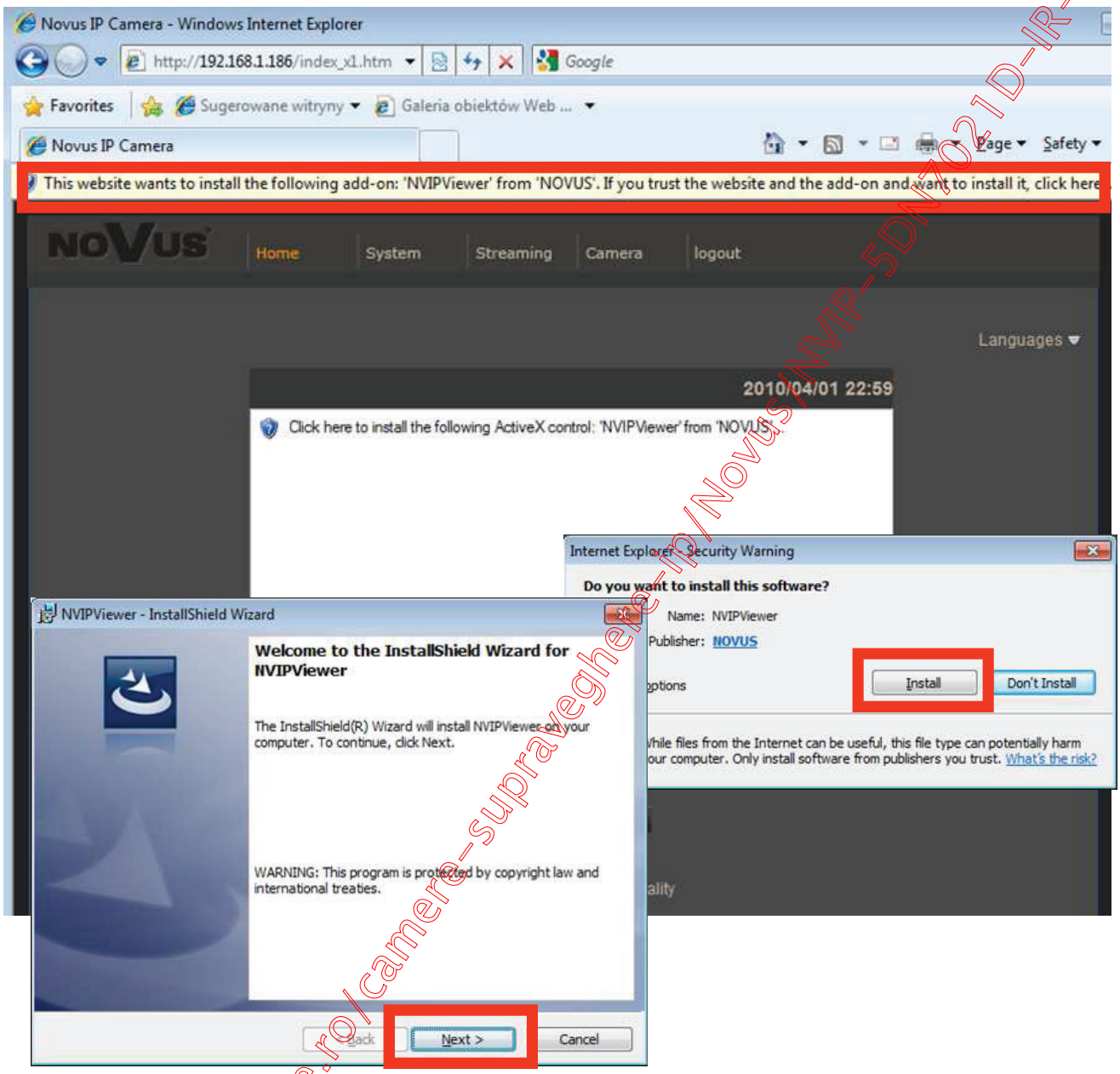
NETWORK CONNECTION UTILIZING WEB BROWSER



If the installation fails, changing security settings for the IE browser is required. In order to do that, please choose: *Tools* > *Internet options* > *Security tab* > *Custom level* and:

- Under *Download unsigned ActiveX controls* - select either Enable or Prompt
- Under *Initialize and script ActiveX controls not marked as safe* - select Enable or Prompt

You can also add the camera's IP address to "*trusted zone"* and set lowest security level for it.

In addition, when working in Windows Vista/7 the ActiveX applet may be blocked by Windows Defender or User account control. In such case you should allow to run this applet, or simply disable

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NETWORK CONNECTION UTILIZING WEB BROWSER

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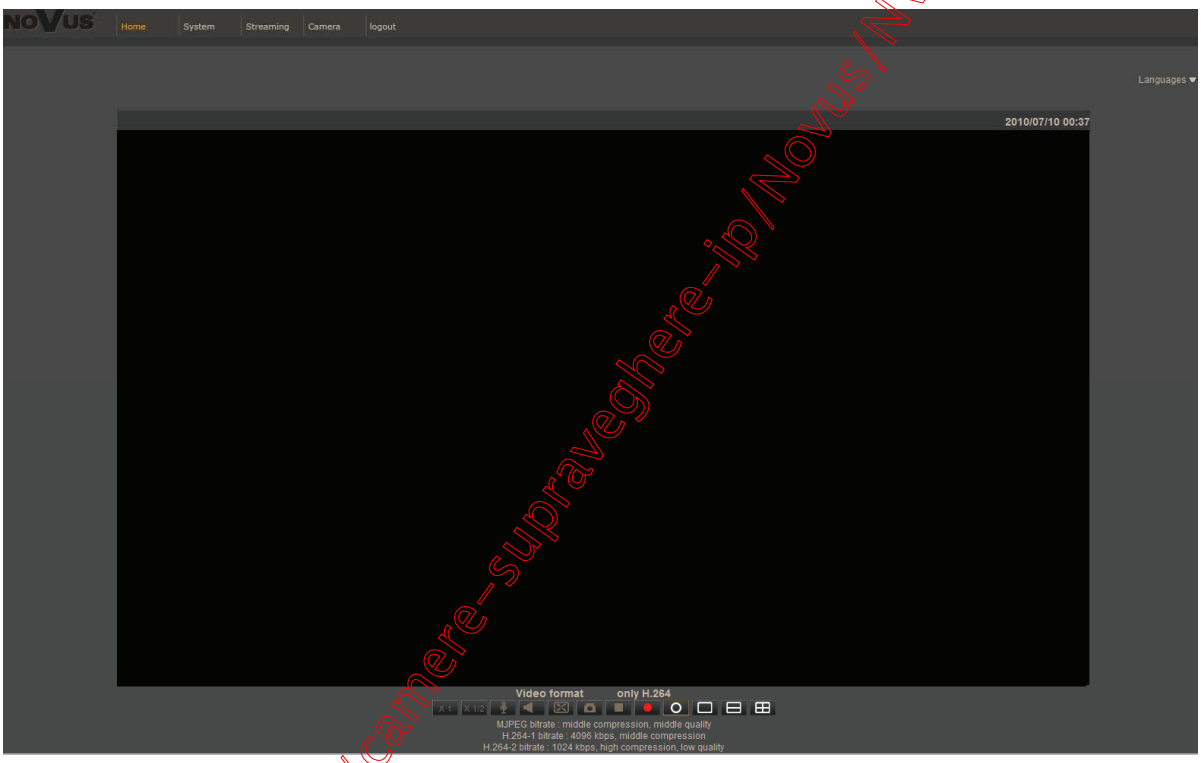
3.3. Connection with IP camera via other browser eg. Chrome, Mozilla Firefox, Safari)

It is also possible to connect to the camera using Mozilla Firefox, but this browser doesn't offer full functionality of the camera, so recommended browser is the Internet Explorer.

The first run of the IP camera in browser is very similar to the IE version. After you type the correct IP address you have to write correct username and password. The default user is **root** and password is **pass**.



Next, blank screen is displayed. Then you have to install the missing Quick Time plug-in from site:

http://www.apple.com/quicktime/download/

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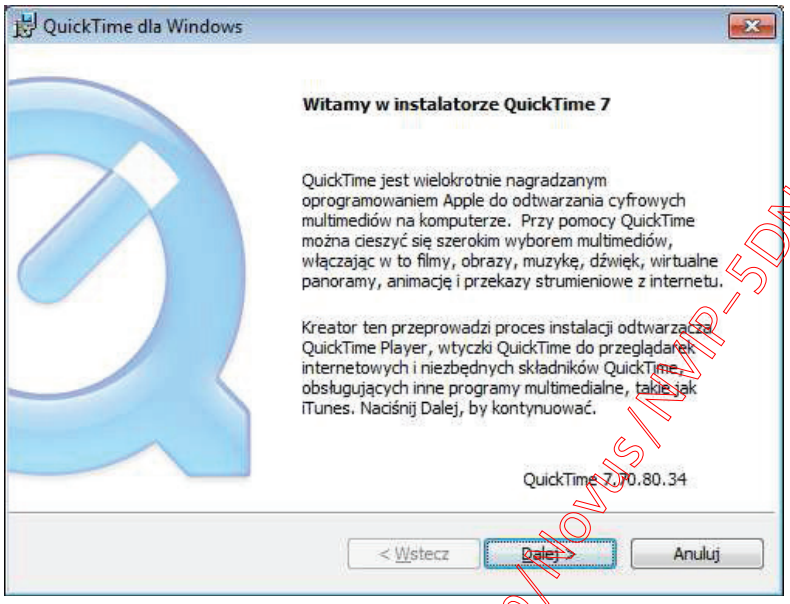
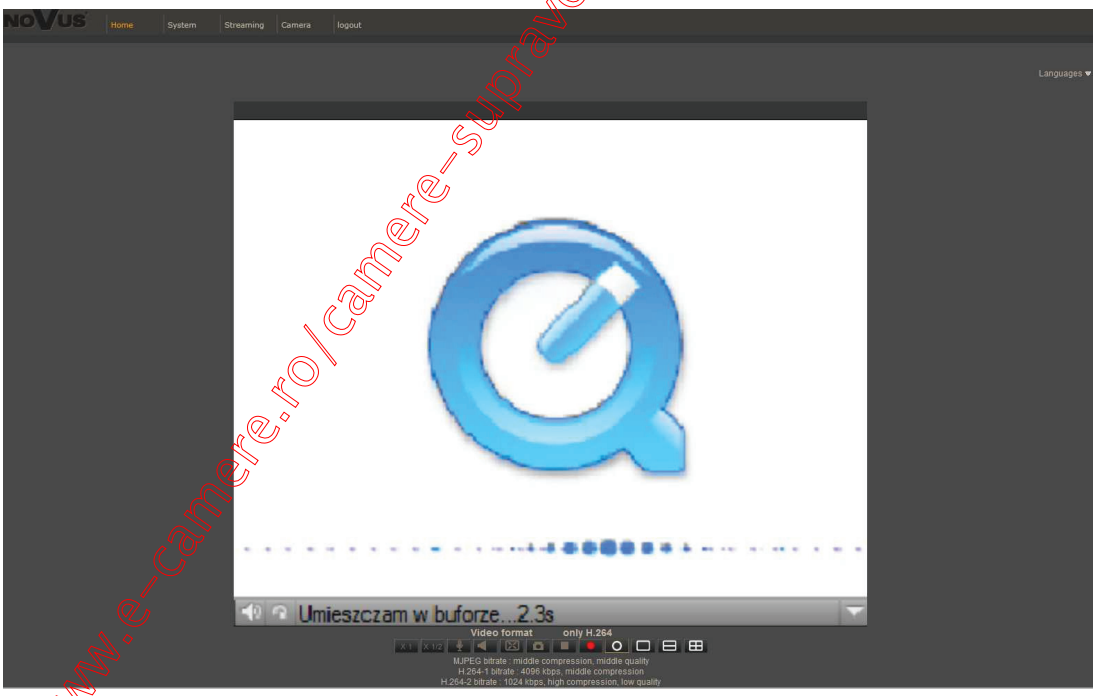
NETWORK CONNECTION UTILIZING WEB BROWSER


QuickTime dla Windows
Witamy w instalatorze QuickTime 7
QuickTime jest wielokrotnie nagradzanym oprogramowaniem Apple do odtwarzania cyfrowych multimediów na komputerze. Przy pomocy QuickTime można cieszyć się szerokim wyborem multimediów, włączając w to filmy, obrazy, muzykę, dźwięk, wirtualne panoramy, animację i przekazy strumieniowe z internetu.
Kreator ten przeprowadzi proces instalacji odtwarzacza QuickTime Player, wtyczki QuickTime do przeglądarek internetowych i niezbędnych składników QuickTime, obsługujących inne programy multimedialne, takie jak iTunes. Naciśnij Dalej, by kontynuować.
QuickTime 7.70.80.34
< Wstecz
Dalej >
Anuluj

After downloading and running it, a window depicting installation of particular components is then displayed. After proper installation pictures from the camera should become visible



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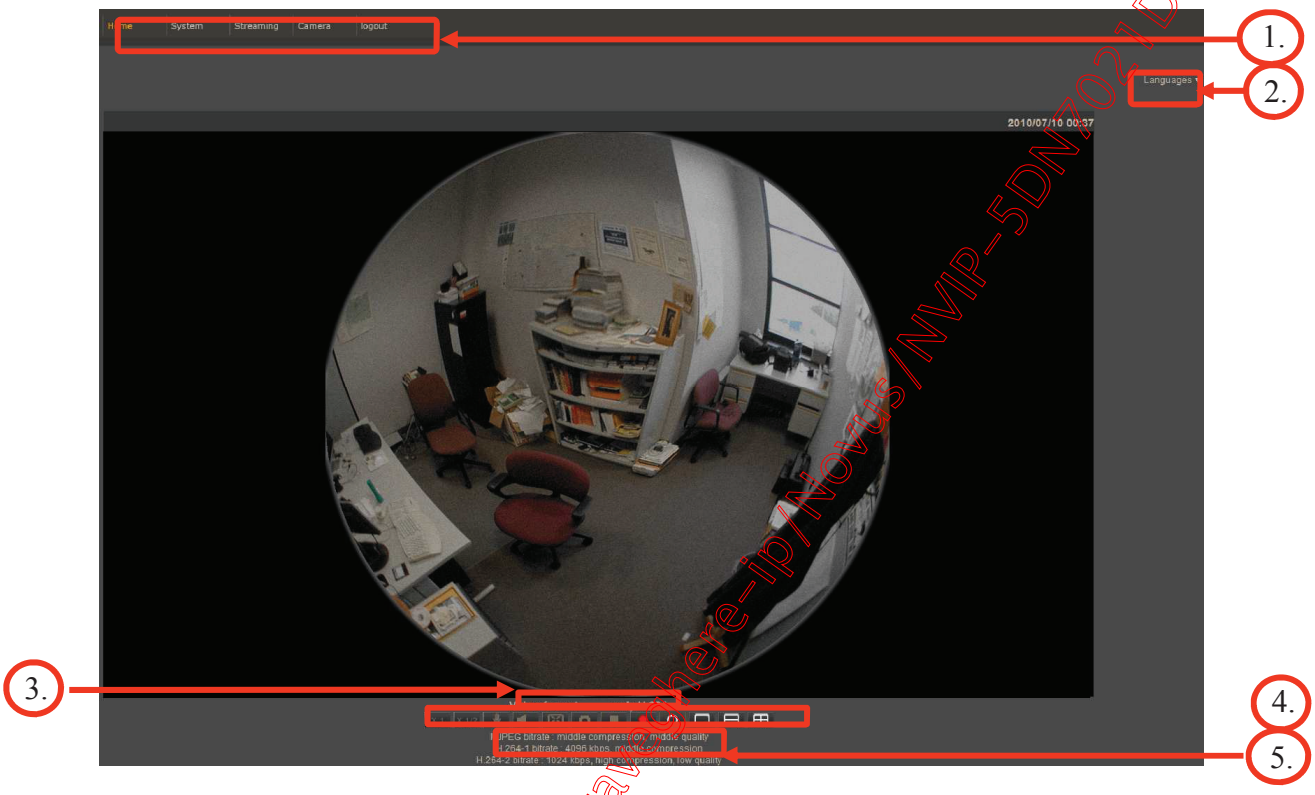
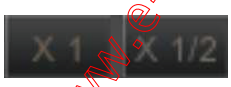
4. WWW INTERFACE - WORKING WITH IP CAMERA

4.1. Displaying live pictures

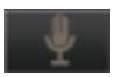


1. Main tabs
   - Home — live view page
   - System — camera settings (IP, recording, sending alarm messages, motion detection)
   - Streaming — streaming settings for audio and video audio
   - Camera — picture settings
   - Logout
2. Language selection.
3. Video stream selection.
4. ActiveX settings for live video.



- Display mode in web browser

- Full screen view



- Microphone - enable audio from microphone

- Speaker - enable audio sending to the camera

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WWW INTERFACE - WORKING WITH IP CAMERA

- Snapshot - saves the current frame in JPEG format

- Video Streaming pause/play button

- Web recording to AVI button

- Enables/disables the "fisheye view"

- Enables / disables the "digital PTZ" mode. While in it, it's possible to move the picture by holding the left mouse button and dragging it along the screen, which will in turn display a corresponding movement direction indicator. Single LMB click on any part of the screen places it in the middle of video window.

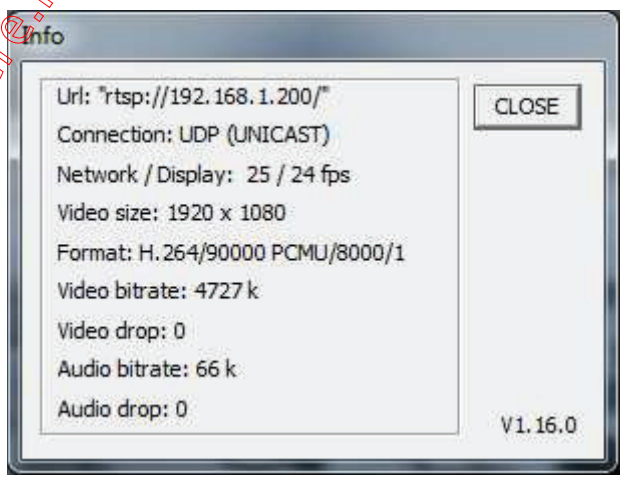
- Enables split-screen view, each part of it being responsible for displaying 180 degree view of the scene.

- Enables 2x2 screen view, with each quarter of the video window displaying 90-degree sectors.

Note: Video analysis is performed at the computer which is remotely connected with the camera. Digital PTZ function, due to number of calculations required in video processing, may cause general decrease in computing power and decrease in operating system performance, depending on the PC hardware configuration.

5. Video streaming information.

Right mouse button click on the live screen view displays additional information about actual video and audio transition parameters.



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5. ELECTRIC CONNECTORS AND ACCESORIES

5.1. Connecting power supply to the camera.

The camera is supplied by using RJ45 network socket. To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af). You can also use a power injector compatible with IEEE 802.3af standard.

Information:

Power supply adapter is not included. Please use power adapter with parameters specified in user's manual.

Caution:

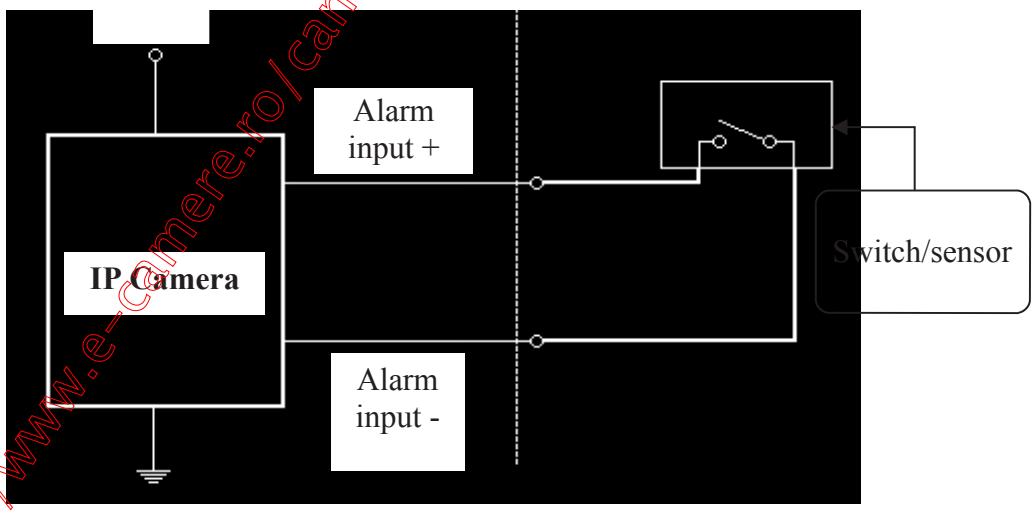
In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors is advised. Any damages resulting from surges are not eligible for service repairs.

5.2. Connecting alarm inputs/outputs.

- Input and output connector states:

Alarm input	Normal state	5V	-
	Active state	0V	I<0,2mA
Alarm output	Normal state	No connected (R=∞)	-
	Active state	Conected (R=30Ω)	0.1A, 30VDC/AC

- Alarm input connections



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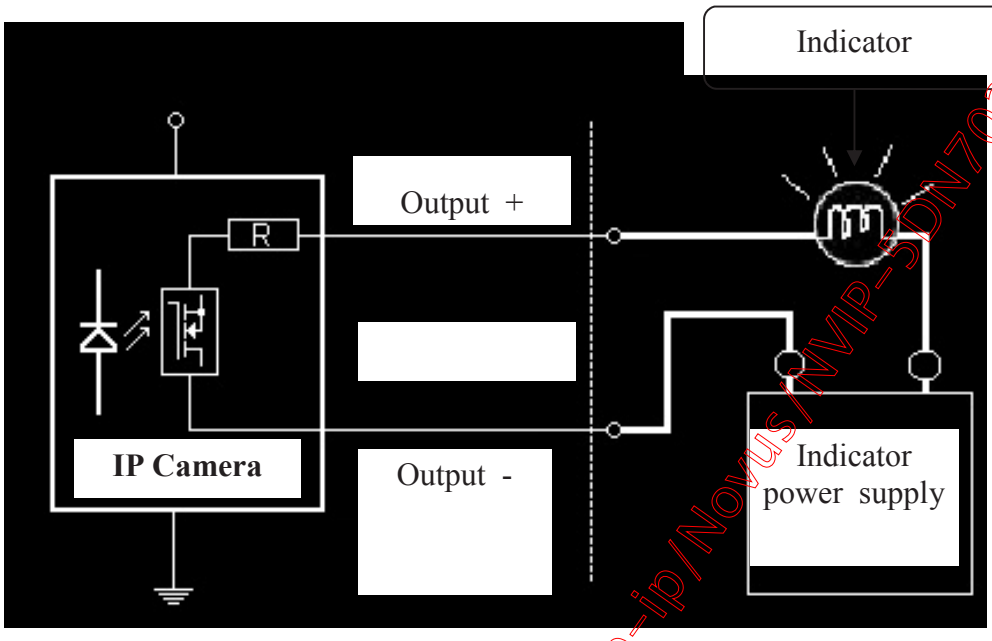
ELECTRIC CONNECTORS AND ACCESORIES

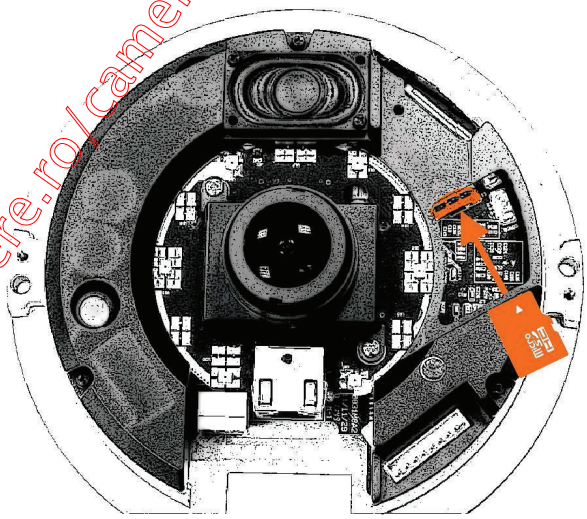
- Alarm output electric connections



5.3. SD card installation

Camera supports SD and SDHC cards with their capacity up to 16GB. In order to install the card properly, please follow the instructions below:

- Format the card in FAT32 file system using a PC computer
- Turn the camera off
- Mount SD card in the socket located at the camera's base, according to the picture:



- Turn the camera on
- Check the SD card by checking its capacity in the *STORAGE MANAGEMENT* tab.

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6. RESTORING FACTORY DEFAULTS

NOVUS IP cameras allow to restore defaults via:

- software (web browser level) resetting the camera settings
- hardware (using reset) restores factory defaults.

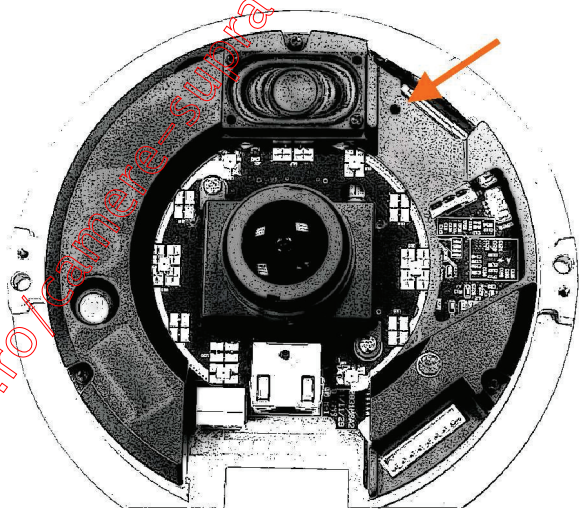
6.1. Restoring software factory defaults

Factory software default restores default settings of the IP camera except network settings. The camera re-starts then, taking about one minute to complete. Option to restore the factory default is described in *SETUP>FACTORY DEFAULT* tab.

6.2. Restoring hardware factory defaults in IP cameras

In order to restore factory defaults for the camera please follow the instructions:

- press the *RESET* button and hold on for 10 seconds
- release button
- log on after approx. 1 minute using default IP address (http://192.168.1.200) and default user name (root) and password (pass)



In the NVIP-5DN7021D/IR-2Preset button is located as depicted below. Non metal, thin object (e.g. match) is recommended for pushing it.

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